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Diagnosis Coding for Newborn Complications and Congenital Disorders

Audio Seminar

August 19, 2004

Practical Tools for Seminar Learning

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Faculty

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Ms. Neville is a Revenue Analyst at the Mayo Clinic with more than 20 years experience in health care. She is currently responsible for coding, charge capture and compliance for a variety of specialty practices. She has managed regulatory projects including APC implementation and HIPAA Transaction & Code Set implementation; performed analysis of coding and charge capture processes; and coordinated policy development for coding and compliance. Prior positions include Director of Corporate Compliance; national consultant for physician billing and compliance; college instructor in coding and reimbursement; collaborator on Step-by-Step Medical Coding; author and technical editor for national publications. She is the Chair of the Coding Policy and Strategy Committee for AHIMA; a member of Editorial Advisory Board for HCPCS; and member of the AHA's advisory task force for ICD-10.

Jerry Williamson, MD, FAAP, LHRM

Dr Williamson is a Board Certified physician, healthcare executive and Licensed Health Care Risk Manager with over 25 years experience in private practice and healthcare management. During his career, Dr. Williamson has served as Medical Director for a Third Party Administrator, Vice President of Medical Affairs for a 280 bed hospital, Assistant Medical Director for a Staff Model HMO and as a private practice physician. In addition to his private consulting duties, he presently serves as the Director of Special Projects for a Federally Qualified Community Health Center.

Dr. Williamson has been a national speaker on topics that include HIPAA, Healthcare Compliance, Medical Coding, Prevention of Medical Errors, and Practice Management topics for professional organizations. He is a fellow of the American Academy of Pediatrics, and is a member of the American Medical Association, the American College of Physician Executives, the Florida Bar Health Law Division, and the Southern HIPAA Administrative Regional Process. Dr. Williamson is a Supreme Court Certified Dependency Mediator, and formally trained arbitrator and listed neutral with the American Arbitration Association.

Table of Contents

Introduction

A. Pregnancy

Gestation (Maturity)

- **Premature (pre-term) live born infant delivered before 37 weeks from the first day of the last menstrual period (LMP)**
- **Term**
- **Post mature (post term) live born infant delivered after 42 weeks of gestation.**

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B. Birth Weight:

LBW **2500 grams or less at birth**

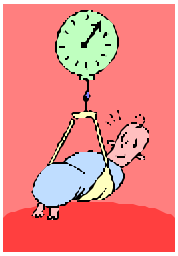
VLBW **1500 grams or less at birth**

ELBW **1000 grams or less at birth**

AGA – Appropriate for gestational age

SGA – (IUGR) small for gestational age

LGA – Large for gestational age



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C. Labor and Delivery type

D. Physical Examination

- **Apgar Score**
- **Abnormalities**

Congenital defects (anomalies) occur in 3-5% of infants

E. Neonatal Period – the first 4 weeks of life after birth.

Period I. Birth to <24 hours

Period II. 24 hours to 7 days

Period III. 7 days to 28 days

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CASE #1

Male infant was born to a 30 y/o woman, gravida 1, para 0. The pregnancy was 38 weeks by dates and complicated by poorly controlled diabetes. The infant was delivered by C-section with Apgar scores of 5 and 7 at one and five minutes respectively.

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Physical Findings:

- **General Appearance:**
  Birth weight 9# 15 oz.
  Large plump appearing infant at times tremulous and hyper-excitable.
- **HEENT: WNL**
- **Neck: WNL**
- **Lungs: Tachypnea noted. Air exchange good. No rales. No wheezing.**
- **Cardiac: Harsh grade II-III/VI systolic murmur.**
  Pulses in upper & lower extremities WNL
- **Abdomen: WNL**
- **Skin: Pink**
- **EXT: WNL**
- **GU: WNL**

Neurologic exam was physiologic except for the previously described tremulous & hyper-excitable symptoms.

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Labs:

Initial serum glucose was reported to be 20 & the infant responded well to IV glucose. The IV was discontinued on day 2, once the infant stabilized and began taking oral feedings.

The serum calcium, magnesium, and remainder of glucose determinations were WNL. The serum bilirubin was elevated on day #2 requiring photo therapy.

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Radiology:

Chest X-ray: mild cardiomegaly otherwise WNL

Cardiac Echo: VSD with mild cardiomegaly

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Diagnosis:

1. Term male infant LGA
2. Infant of diabetic mother
3. Congenital heart disease, ventricular septal defect
4. Hyperbilirubinemia

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Question – Case 1

Symptoms of an "infant of diabetic mother" may include macrosomia, transient tachypnea, polycythemia and endocrine disturbances.

With how many symptoms must a baby present to qualify for code 775.0, Syndrome of "infant of diabetic mother?"

1. **Zero**
2. **One**
3. **Two or more**

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Code Assignment Case #1

- **V30.01 Single liveborn infant, delivered in the hospital, by cesarean section**
- **775.0 "Infant of a diabetic mother syndrome"**
- **745.4 Ventricular septal defect (congenital)**
- **774.6 Unspecified fetal and neonatal jaundice**

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CASE #2

Female infant born at 39 weeks gestation to a 41 y/o woman, gravida 4, para 2, Ab 1 by vaginal delivery. Apgar scores were 8 and 8 at one and five minutes respectively. The pregnancy and maternal history was unremarkable except for the advanced maternal age.

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Physical Findings:

- **General appearance:**
  Birth weight 6# 10 oz.
  Alert, pink, in no apparent distress
- **HEENT: The head is microcephlic with flat occiput. Anterior fontanelle soft and flat.**
  - **Eyes: upslanting palpebral fissures with prominent epicanthal folds. Iris speckling is noted.**
  - **Ears: appear small, prominent & low set.**
  - **Nose: appears small with a flat nasal bridge; large protruding tongue is noted.**

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Physical Findings:

- **Neck: loose folds are noted in posterior neck**
- **Chest: WNL**
- **Lungs: Clear**
- **CV: harsh systolic murmur grade II-III/VI among the left sternal border.**
- **Abdomen: benign**
- **Extremities: hands are broad in appearance with short phalanges bilateral simian creases noted.**

  Feet: wide gap between first and second toes.
- **GU: normal female genitalia**
- **Neuro: mild to moderate generated hypotonia remainder physiologic**

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Diagnosis:

1. **Term female infant, appropriate for gestational age**
2. **Probable Down's Syndrome, chromosomal karyotype pending.**

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Question – Case #2

The diagnostic statement by the physician includes "Probable Down's Syndrome." Because this baby presents with so many symptoms of Down's, would it be appropriate to code Down's Syndrome as confirmed on the physician's claim?

1. **Yes**
2. **No**

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Code Assignment – Case #2

- **V30.00 Single liveborn, born in hospital, delivered vaginally**
- **757.2 Simian crease**
- **754.0 Congenital musculoskeletal deformities of skull, face, jaw**
- **779.89 Other specified conditions originating in the perinatal period (Hypotonia)**
- **761.8 Other specified maternal complications of pregnancy (maternal age)**
- **785.2 Heart murmur**

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CASE #3

Female infant born at 39 weeks gestation to a 20 y/o woman gravida 2, para 1 by vaginal delivery. Apgar scores were 6 and 7 at one and five minutes respectively. The maternal history was remarkable for what she described as moderate alcohol use during the first 7 months of the pregnancy. She denied any other substance abuse.

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Physical Findings:

General appearance:

Birth weight 4# 3 oz

Alert infant appearing small for gestational age, no acute distress.

HEENT: Anterior fontanelle soft

Eyes: Short palpebral fissures with prominent epicanthal folds

Ent: Maxillary hypoplasia, micrognathia and very thin appearing upper lip

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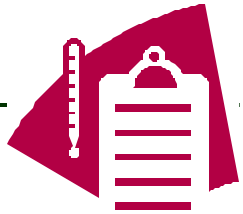
Physical Findings:



Neck:	**WNL**
Chest:	**WNL**
Lungs:	**Clear**
Cardiac:	**Grade II/VI systolic murmur, at lower left sternal border. Pulses in upper and lower extremities WNL.**
Abdomen:	**WNL**
GU:	**WNL female genitalia**
Neuro:	**WNL**

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Diagnosis:

1. **Term female infant small for gestational age.**
2. **Probable fetal alcohol syndrome.**
3. **Ventricular septal defect.**

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Question – Case #3

Maxillary hypoplasia, a symptom of fetal alcohol syndrome, is identified in this infant. This is coded as:

1. 754.0

2. 524.03

3. Both 754.0 and 524.03

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Coding – Case #3

- **V30.00 Single liveborn infant, born in hospital, vaginally**
- **764.08 Light for dates**
- **524.03 Maxillary hypoplasia**
- **743.63 Epicanthal fold**
- **744.89 Other anomalies of face and neck**
- **745.4 Ventricular septal defect**

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CASE #4

A male infant was delivered at 40 weeks gestation to a 27 y/o gravida 2, para 1, woman. Pregnancy was reported to be unremarkable. Labor was prolonged, and there was significant cephalopelvic disproportion and associated dystonia. Delivery was vaginal, requiring forceps. Apgars were 8 and 9 at one and five minutes respectively.

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Physical Findings:

General appearance:

Birth Weight 8# 0 oz.

Alert term infant, no apparent distress.

HEENT:

Head: **marked molding of the head with left parietal swelling, and bruising noted. Nontender, no evidence of depressed skull fracture on palpation.**

Eyes: **Sclera & Conj: bilateral sub conjunctival hemorrhages noted. Bilateral red reflex positive. No eye discharge.**

Ent: **WNL**

Neck: **WNL**

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Physical Findings:

Chest/lungs:	**WNL**
Cardiac:	**WNL**
Abdomen:	**WNL**
GU:	**WNL**
Skin:	**significant bruising of the face & head with associated petechiae limited to face and head. Remainder of skin pink, no rashes.**
Extremities:	**left clavicular fracture noted. Full range of motion of upper and lower extremities.**
Neurological:	**WNL for age**

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Labs:

CBC WNL

ABO studies negative

Bilirubin day #2 elevated requiring photo therapy

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Radiology:

X-ray skull: non depressed skull fracture left parietal with soft tissue swelling.

X-ray clavicle: non displaced fracture of left clavicle.

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Diagnosis:

1. Term male infant, appropriate for gestational age
2. Left cephalhematoma with associated non depressed skull fracture
3. Non displaced fracture of left clavicle
4. Physiologic jaundice

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Question – Case #4

Left cephalhematoma with associated non depressed skull fracture is coded as:

1. **803.21**
2. **767.3**
3. **803.21 and 767.19**
4. **767.3 and 767.1**

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Coding Case #4

- **V30.00 Single liveborn, born in hospital, vaginally**
- **767.3 Birth trauma, fracture of skull**
- **767.19 Cephalhematoma**
- **767.2 Fracture of clavicle**
- **763.1 Cephalopelvic disproportion affecting fetus or newborn**
- **763.2 Forceps delivery**
- **774.6 Physiological jaundice**

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Summary

1. **The principle diagnosis for newborns (V3X.XX) identifies the number of fetuses, place of birth and type of delivery.**
2. **Syndromes are comprised of multiple signs and symptoms. It is not necessary for every sign and symptom to be present; however, the physician must document the syndrome.**

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Summary

3. **Always check for terminology "affecting fetus or newborn" when using the alphabetic index.**
4. **Code maternal conditions when they affect the health and/or management of the newborn.**

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Audience Questions

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Appendix

Appendix – Apgar Score

The Apgar score is determined by evaluating the newborn baby on five simple criteria on a scale from zero to two and summing up the five values thus obtained. The resulting Apgar score ranges from zero to 10.

The five criteria of the Apgar score			
	Score 0	**Score 1**	**Score 2**
Heart rate	absent	<100	>100
Respiration	absent	weak or irregular	strong
Muscle tone	none	some flexion	active movement
Reflex irritability	no response to stimulation	grimace/feeble cry when stimulated	sneeze/cough/pulls away when stimulated
Skin color	blue all over	blue at extremities	normal

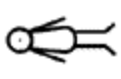
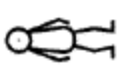
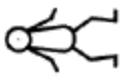
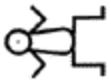
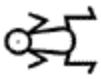
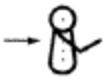
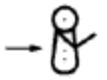
The test is generally done at 1 and 5 minutes after birth, and may be repeated later if the score is, and remains, low. Scores below 3 are generally regarded as critically low, with 4 – 7 fairly low and over 7 generally normal.

- **Low scores at the one minute test may require medical attention, but are not an indication of longer term problems, particularly if there is an improvement by the stage of the five minute test. If the Apgar score remains below 3 at later times such as 10, 15, or 30 minutes, there is a risk that the child will suffer longer term neurological damage.**
- **Apgar, V.: *A proposal for a new method of evaluation of the newborn infant*, Curr. Res. Anesth. Analg. 1953;32, pp. 260–267**

Appendix – Ballard Score

FIG. 256-1. Assessment of gestational age--new Ballard score. (Modified from Ballard JL, Khoury JC, Wedig K, et al: "New Ballard score, expanded to include extremely premature infants." *The Journal of Pediatrics* 119(3):417-423, 1991; used with permission of the CV Mosby Company.)

Neuromuscular Maturity

Score	−1	0	1	2	3	4	5
Posture							
Square window (wrist)	 >90°	 90°	 60°	 45°	 30°	0°	
Arm recoil		 180°	 140°–180°	 110°–140°	 90°–110°	 <90°	
Popliteal angle	 180°	 160°	 140°	 120°	 100°	 90°	 <90°
Scarf sign							
Heel to ear							

Physical Maturity

Skin	Sticky, friable, transparent	Gelatinous, red, translucent	Smooth, pink; visible veins	Superficial peeling and/or rash; few veins	Cracking, pale areas; rare veins	Parchment, deep cracking; no vessels	Leathery, cracked, wrinkled
Lanugo	None	Sparse	Abundant	Thinning	Bald areas	Mostly bald	
Plantar surface	Heel-toe 40–50 mm: −1 <40 mm: −2	>50 mm, no crease	Faint red marks	Anterior transverse crease only	Creases anterior 2/3	Creases over entire sole	
Breast	Imperceptible	Barely perceptible	Flat areola, no bud	Stippled areola, 1–2 mm bud	Raised areola, 3–4 mm bud	Full areola, 5–10 mm bud	
Eye/Ear	Lids fused loosely: −1 tightly: −2	Lids open; pinna flat; stays folded	Slightly curved pinna; soft; slow recoil	Well curved pinna; soft but ready recoil	Formed and firm, instant recoil	Thick cartilage, ear stiff	
Genitals (male)	Scrotum flat, smooth	Scrotum empty, faint rugae	Testes in upper canal, rare rugae	Testes descending, few rugae	Testes down, good rugae	Testes pendulous, deep rugae	
Genitals (female)	Clitoris prominent, labia flat	Clitoris prominent, small labia minora	Clitoris prominent, enlarging minora	Majora and minora equally prominent	Majora large, minora small	Majora cover clitoris and minora	

Maturity Rating

Score	Weeks
−10	20
−5	22
0	24
5	26
10	28
15	30
20	32
25	34
30	36
35	38
40	40
45	42
50	44

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